

Claims 1 and 4 have been amended to remove the word "substantially". Regarding claim 25, MPEP §2173.05(b)(D) states that the term "substantially" is often used and that this term has been held as definite. One of ordinary skill in the art would know what is meant by "substantially pure metallic material". In addition, claim 26 has been amended to state that the surface is "essentially aluminum".

The Examiner rejected claims 1, 2, 7, 25, and 31 under 35 USC § 102 as being anticipated by Hills et al. The Examiner stated that Hills et al. teaches improving the etch uniformity of a plasma process by using a ring (124) and that the ring has a surface which is even and parallel to the surface of the substrate (110) and that the ring surrounds the substrate and is made of aluminum (col. 5, lines 60-66).

Hills et al. does not disclose the simultaneous etching of the ring (124) and the substrate, as recited in claims 1 and 25. The Examiner failed to point out anything in Hills et al. that discloses that the ring (124) is etched. In addition, the Examiner cited col. 5, lines 60-66, of Hills et al. as stating that ring (124) is anodized aluminum. The cited passage states that the "pedestal focus ring" (114), the "gas distribution plate" (170), the "gas distribution ring" (172), and their component parts are made of anodized aluminum. Anodized aluminum is an aluminum oxygen combination, and therefore is not pure or substantially pure aluminum as recited in claims 1 and 25. In addition, ring 124 is not the "pedestal focus ring" (114), the "gas distribution plate" (170), the "gas distribution ring" (172), or one of their component parts. Instead ring 124 is a supporting annulus. For these reasons, claims 1 and 25 are not anticipated by Hills et al.

Claim 2 is dependent on claim 1. Claim 2 further recites that the sacrificial etch portion represents a ring surrounding the wafer. Since ring (124) is not a sacrificial etch portion, it cannot disclose a sacrificial etch portion that surrounds the wafer. For these reasons, claim 2 is not anticipated by Hills et al.

Claim 7 is dependent on claim 1, and for this reason is not anticipated by Hills et al.

Claim 31 is dependent on claim 25, and for this reason is not anticipated by Hills et al.

The Examiner rejected claim 33 under 35 USC § 103 as being unpatentable over Hills et al. Claim 33 is dependent on claim 25. For this reason, claim 33 is not made obvious by Hills et al.

The Examiner rejected claims 4-6, 8-10, 26-30, and 32 under 35 USC § 103 as being unpatentable over Hills et al. in view of Abraham (5,772,906) and Abraham et al. (5,952,244). The Examiner stated that Hills does not recite specifically the claimed type of plasma apparatus, but that Abraham and Abraham et al. teach the claimed chambers and processes (aluminum

etching using chlorine) and that it would have been obvious to expend the teaching of Hills et al. to any conventional plasma etching process.

Claim 4 is dependent on claim 1 and further recites that the sacrificial etch portion is pure aluminum. Since ring (124) is not a sacrificial etch portion, it cannot disclose a pure aluminum sacrificial etch portion. In addition, the Examiner failed to point out anything in Abraham or Abraham et al. that teaches having the recited ring and that the recited ring is a sacrificial ring made of pure aluminum. For these reasons, claim 4 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claim 5 is dependent on claim 1 and further recites that the etchant source gas includes chlorine. The Examiner failed to point out anything in Hills et al. that discloses a chlorine etch. If the "pedestal focus ring" (114), the "gas distribution plate" (170), the "gas distribution ring" (172) and their components were made of pure aluminum it would not be obvious to use the chlorine etch of Abraham or Abraham et al. with these pure aluminum components, which would cause the etching of these components. For these reasons, claim 5 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claims 6 is dependent on claim 5. For this reason claims 6 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claims 8 and 9 are dependent on claim 1. For this reason, claims 8 and 9 are not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claim 10 is dependent on claim 1 and further recites that material of the sacrificial substrate holder is selected to form substantially volatile byproducts when etched by the plasma. Since Hills et al. does not disclose etching the ring (124), the formation of volatile byproducts is not disclosed. In addition, the Examiner failed to point out anything in Abraham or Abraham et al. that teaches having the recited ring and that the recited ring is a sacrificial ring would form volatile byproducts. For these reasons, claim 10 In addition, the Examiner failed to point out anything in Abraham or Abraham et al. that teaches having the recited ring and that the recited ring is a sacrificial ring made of pure aluminum.

Claim 26, as amended, is dependent on claim 25 and further recites that the substantially pure metallic upper surface is essentially aluminum. An anodized aluminum surface is not essentially aluminum. In addition, the Examiner failed to point out anything in Abraham or Abraham et al. that teaches having the recited ring and that the recited ring is essentially aluminum.

Claim 27 is dependent on claim 26 and further recites that the etchant source gas includes chlorine. The Examiner failed to point out anything in Hills et al. that discloses a chlorine etch.

If the "pedestal focus ring" (114), the "gas distribution plate" (170), the "gas distribution ring" (172) and their components were made essentially of aluminum it would not be obvious to use the chlorine etch of Abraham or Abraham et al. with these pure aluminum components, which would cause the etching of these components. For these reasons, claim 27 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claim 28 is dependent on claim 27. For this reason, claim 28 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Claims 29-30 are dependent on claim 25. For this reason, claims 29-30 are not made obvious by Hills et al. in view of Abraham and Abraham et al.


Claim 32 is dependent on claim 31. For this reason, claim 32 is not made obvious by Hills et al. in view of Abraham and Abraham et al.

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at (831) 655-2300.

If any fees are due in connection with the filing of this Amendment, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0388 (Order No. LAM1P061).

Respectfully submitted,

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